

DEVELOPMENT OF A REGIONAL
TRANSPORTATION PLAN FOR THE
GREATER TORONTO and HAMILTON AREA

TOWARDS
SUSTAINABLE
TRANSPORTATION

MAY 9, 2008



VISION GOALS
AND OBJECTIVES

PRELIMINARY DIRECTIONS
AND CONCEPTS

White Paper #1

White Paper #2

White Paper 1 - Vision

An Integrated Transportation System for
Our Region that Enhances Prosperity,
Sustainability and Quality of Life

White Paper 1 - Goals and Objectives

A high quality of life. – comfort, reliability, choice, attractive, safe.

A thriving, healthy and protected environment.
– smaller carbon footprint, ecosystem approach, conserving land

A strong, prosperous and competitive economy. – functional, integrated, efficient, fiscally sustainable, secure

White Paper 2 - Outline

1. Current And Future Challenges
2. Preliminary Directions
3. Test Concepts
4. Preliminary Estimates and Performance Comparisons
5. Implementation
6. Next Steps

White Paper 2 -Preliminary Directions

- **A System for Complete Mobility** to expand the existing transportation network into a complete and integrated system
- **Placemaking and Mobility Hubs** to support an appropriate and attractive urban form
- **Excellent Customer Service** to provide a safe and convenient travelling experience
- **Sustainable Financing** to fund the system
- **Innovation through Research** to ensure the best plans and ideas are considered and implemented
- **Partnership and Decision Making** to better coordinate and communicate across government sectors, stakeholders & the public.

White Paper 2 -Preliminary Directions

What would it look like:

- Transportation Demand Management (TDM) programs
- Mobility hubs incorporated into planning policy
- Complete communities with walk, cycle and transit supportive design
- Streets designed and operated to better support all modes of transportation
- Comprehensive parking strategies
- Reflect the true cost of using the road system
- improved access for goods to local and international markets
- Reinvest user fees to fund transportation infrastructure
- Financial incentives to promote transit use
- Seamless and integrated transit fares/ services
- Region-wide service standards

White Paper 2 -Preliminary Directions

Successful plan will require ambitious policies and programs to support and create a bold, transformational transportation system

All pieces must work together to encourage a significant change in behaviour – we cannot build our way out of congestion

White Paper 2 -Test Concepts

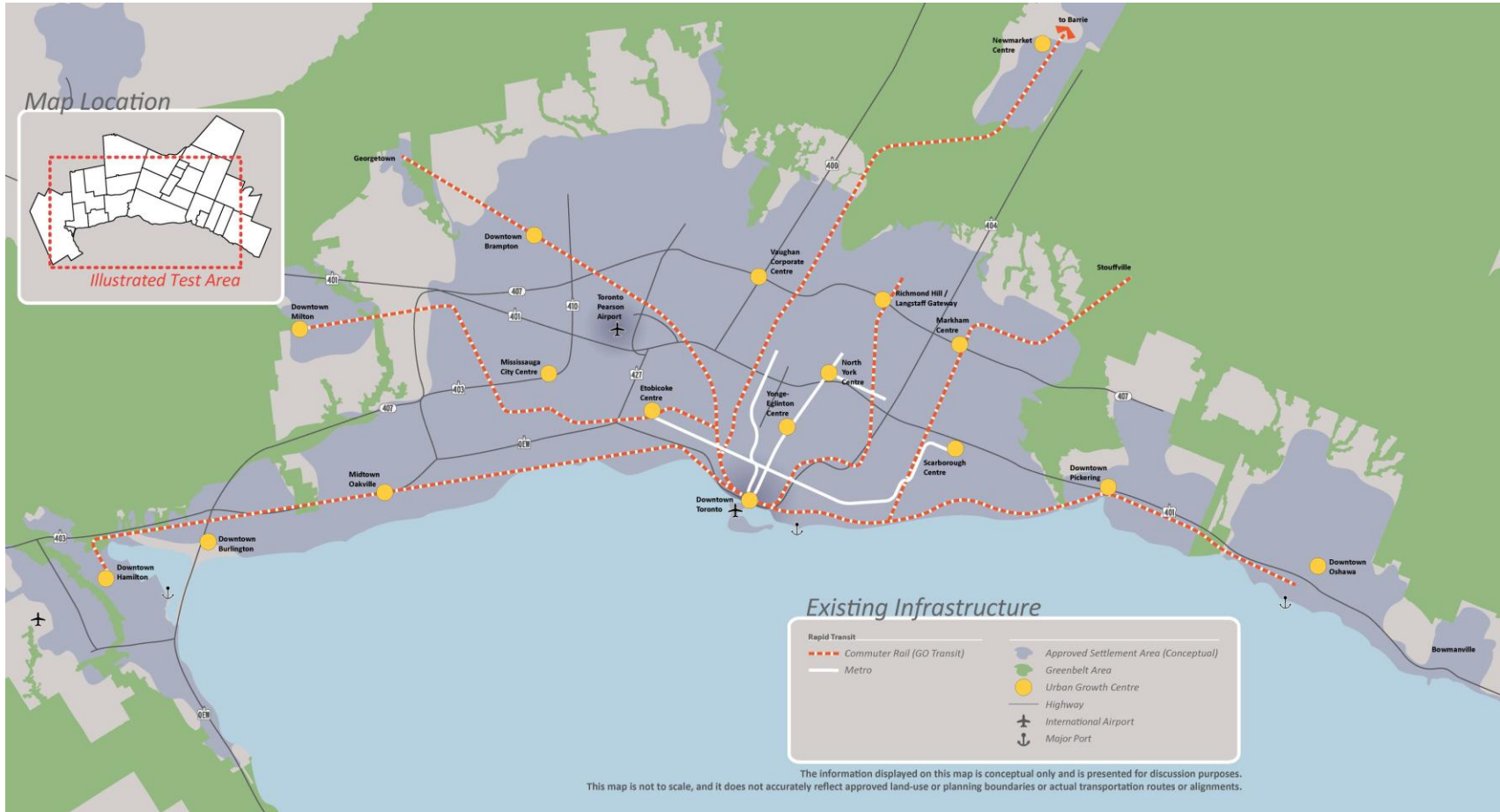
Test Concepts modelled are not mutually exclusive:

- Business-as-Usual
- Linear
- Radial
- Web

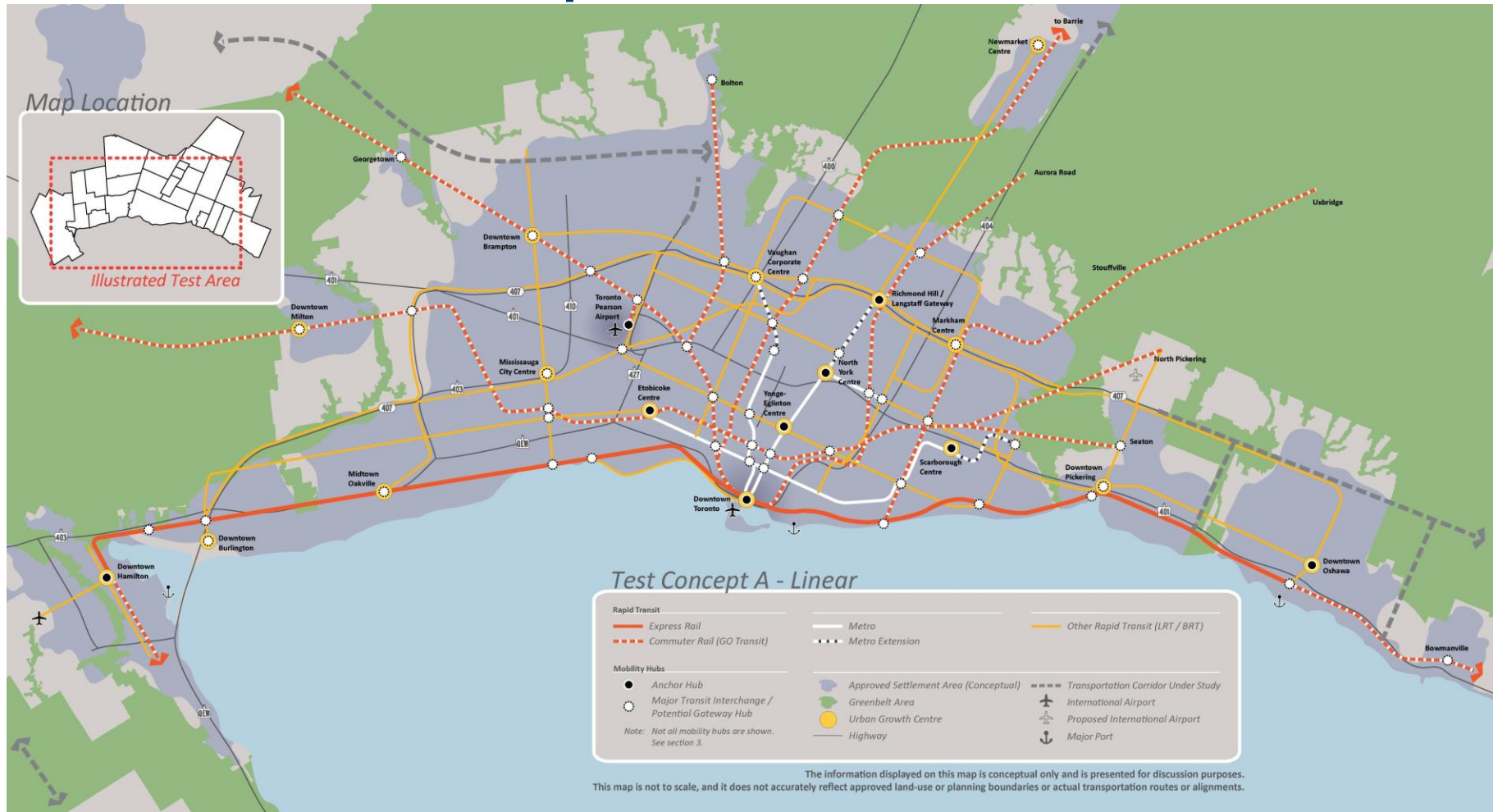
Model methodology:

- Based on MTO GGH model
- Assumes *Growth Plan* forecasts, planned highway and roads improvements, 100% increase in marginal auto operating, increased parking costs, stable transit fares, faster service.

Existing Transportation Network

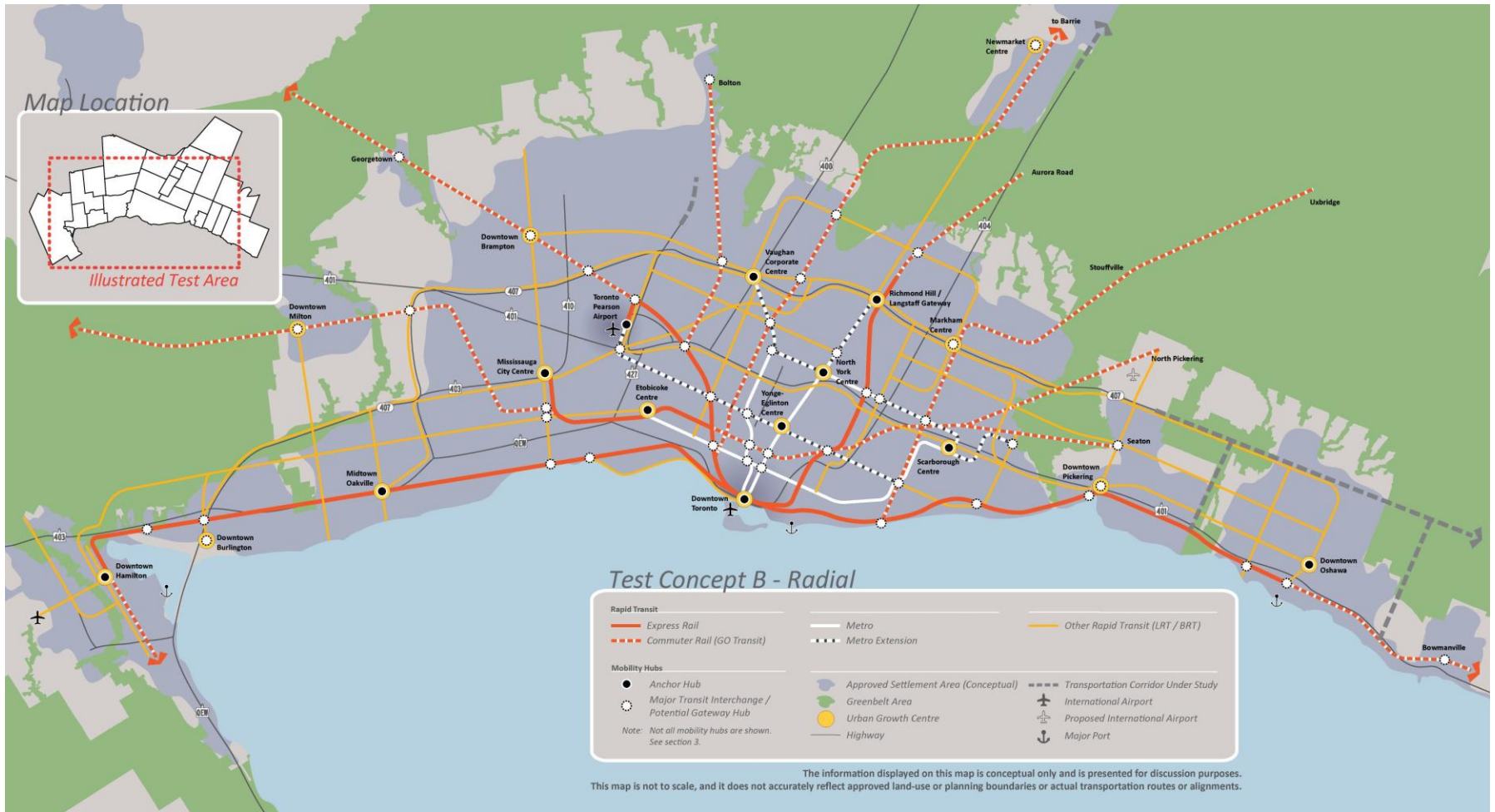


Test Concept A - Linear



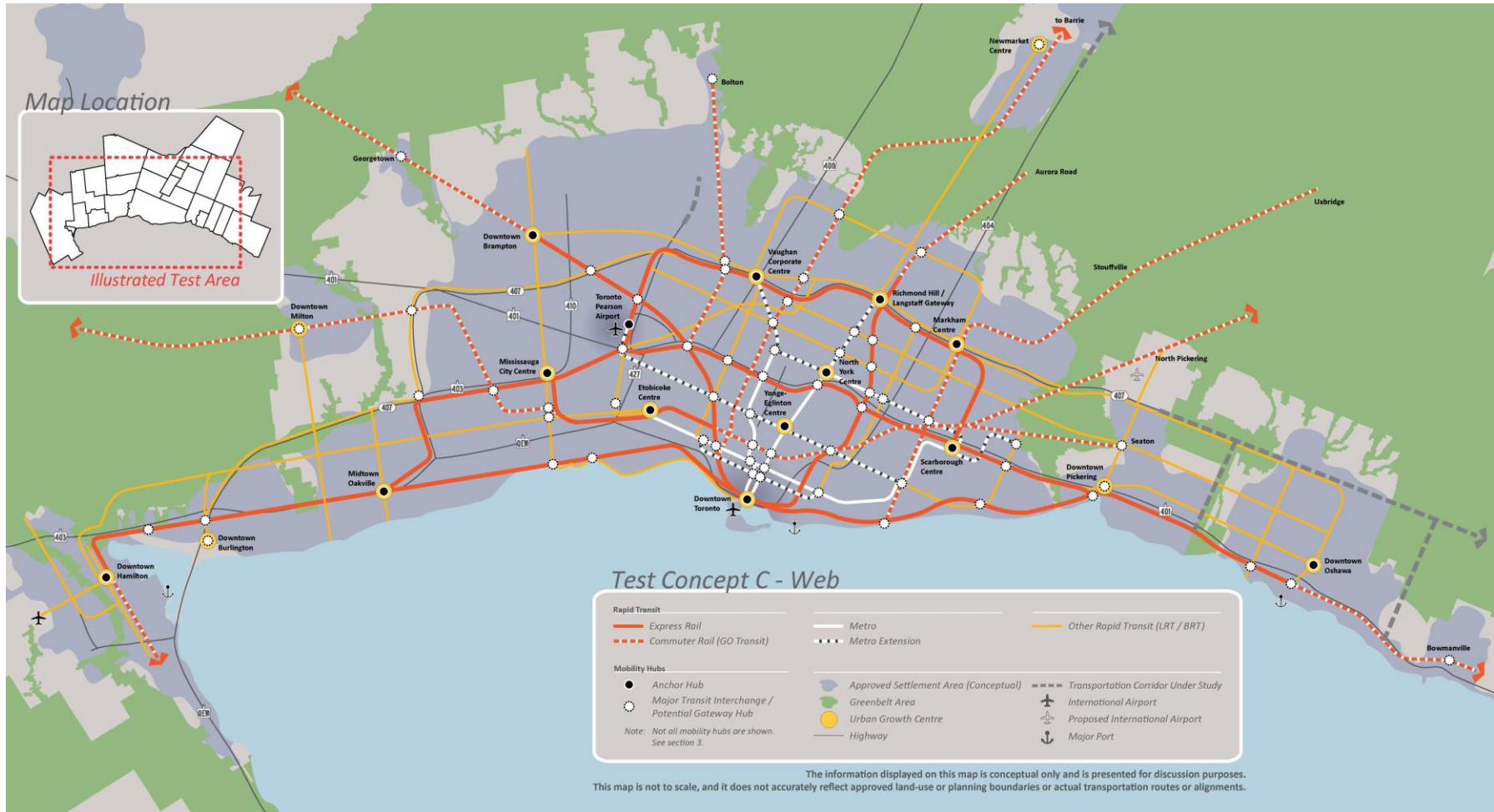
Based on MO2020 with additions to complete connections, fill system gaps and address growth beyond 2020

Test Concept B - Radial



Builds on Test Concept A by strengthening radial corridors radiating from Union Station, with Regional Express (REX) a major component of the concept

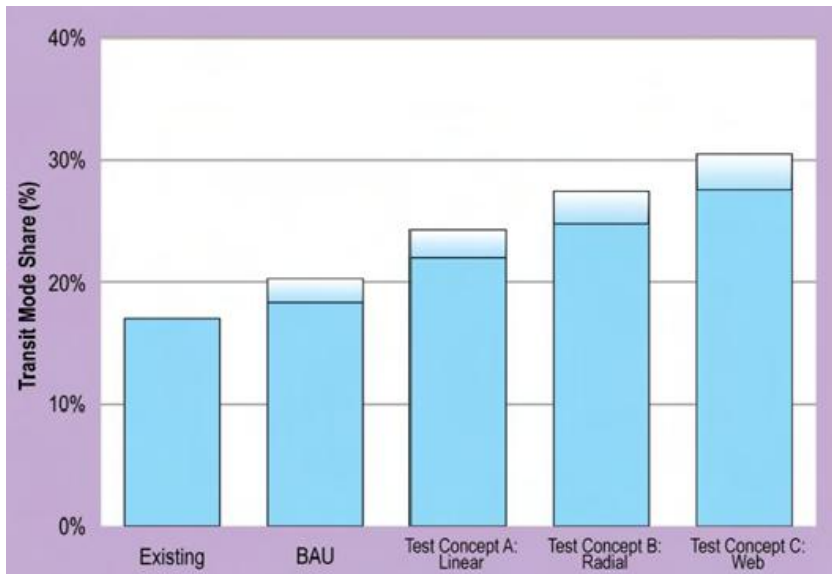
Test Concept C - Web



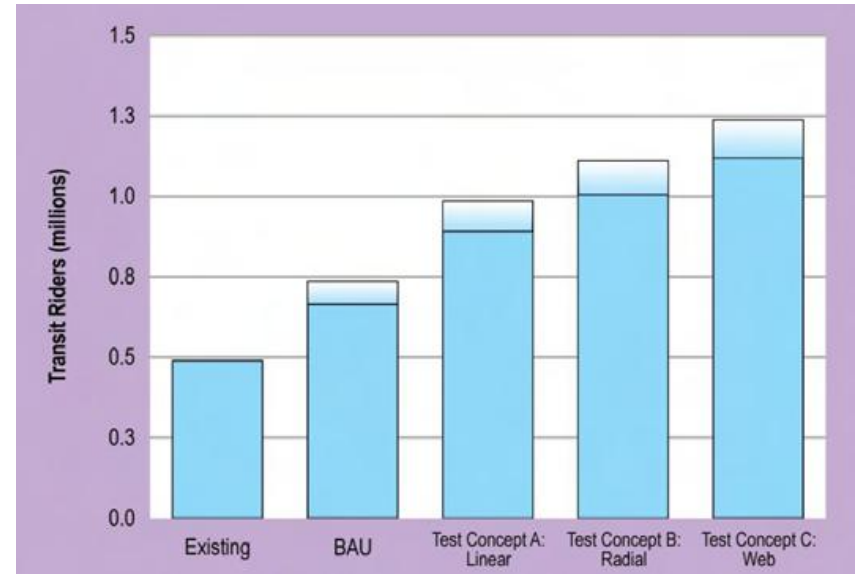
Builds on Test Concept B with enhanced east-west higher order transit lines (REX/ Metro)

Test Concepts Analysis Results

Transit Mode Share -AM Peak Period

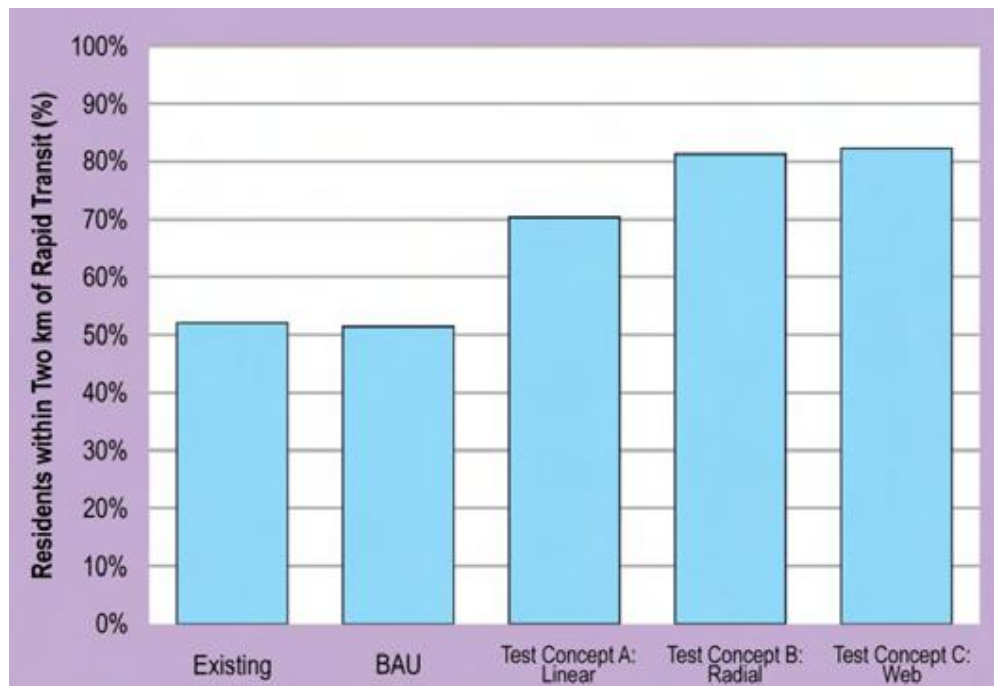


Transit Riders -AM Peak Period



Test Concepts Analysis Results (cont'd)

Residents Within Two Km of Rapid Transit



Test Concepts Analysis Results (cont'd)

Provincial GHG Reduction Target: 15% below 1990 levels by 2020

Transportation Sector Share of Reduction: 19%

Passenger Travel

- 45% from RTP:
 - Investments in Transit & Roads
 - Urban Intensification
 - Transportation Demand Management
- 5% from cleaner electricity
- 50% from technology change and improved vehicle efficiency

Goods Movement

- 3% from modal shift (truck-to-rail)
- 15% from freight-specific Transportation Demand Management
- 21% from improved logistics and urban intensification
- 61% from Improved Vehicle Efficiency and Technology Change

White Paper 2 - Preliminary Estimates

Capital Cost Estimates

	BAU	Test Concept A - Linear	Test Concept B - Radial	Test Concept C - Web
Rapid and Local Transit	5	40	60	80
Regional Roads and Provincial Highways	15	20	15	15
Total *	20	60	75	95
Annual **	1.0	2.4	3.0	3.8
Per capita (in 2006 dollars per year) ***	135	324	405	514

Transit Operating Estimates

	2006	BAU	Test Concept A - Linear	Test Concept B - Radial	Test Concept C - Web
Transit Operating costs (in billions of 2006 dollars per year)	1.6	2.1	2.6	3.3	3.8

GTHA Rapid Transit in Context

Type of Rapid Transit	Length of Rapid Transit Network (km)						
	GTHA				Paris	London	Madrid
	Existing	Case A	Case B	Case C	Existing	Existing	Existing
Regional Express/RER	0	120	200	440	587	119*	9**
Metro/Subway/Tube	70	100	150	160	213	408	227
Total Heavy Rapid Transit	70	220	350	600	800	527	236
Population (million people) ***	6.1	8.6	8.6	8.6	9.9	8.6	5.6
Total HRT per Million People ***	13.2	25.6	40.7	69.8	80.8	61.3	42.1

* Crossrail (approved for construction)

** Downtown suburban rail connector

*** 2031 population for Cases A, B and C; existing population otherwise

Preliminary Observations

A comprehensive approach needed: Combination of bold investment, coordinated transportation and land use planning and supporting policies are needed to achieve economic, social and environmental goals

Transit ridership increases are most significant when combined with aggressive land use intensification in corridors and mobility hubs

Greater transit use/efficiency is achieved with fewer and larger mobility hubs, rather than distributing over a more dispersed area

Preliminary Observations (cont'd)

Regional Express service is viable and would greatly enhance cross-regional mobility

Metro (e.g. subway) improvements should be considered in higher density areas

Feeder bus/paratransit needs will need to double or quadruple in suburban areas

Reductions in GHG emissions can be achieved, but additional suite of supporting programs needed to meet provincial targets

Road Sensitivity Analysis

Impact of road capacity on system performance

- Concept B2 based on B-radial with expanded road capacity
- Concept C2 based on C-web with reduced road capacity

Capital costs:

- B2: \$10B *more*
- C2: \$15B *less*

Ridership:

- B2: 7% less
- C2: slight increase (up to 4% in York)

Transit operating costs:

- B2: lower to serve lower transit ridership
- C2: slightly higher to serve higher transit ridership

Modal Split:

- B2: biggest drops in York (30%) and Peel (28%), but little impact on Toronto ridership
- C2: little change

Road Sensitivity Analysis (cont'd)

Energy and Emissions

- B2 = 9% longer and 4% more auto trips; 10% energy use increase; 10% GHG emissions increase
- C2 = 6% shorter and less than 1% fewer trips; 3.4% energy use decrease; 6% GHG emissions decrease.

Accessibility, speed and congestion (induced travel not included)

- B2 = 9% more people would be able to get to work within 45 minutes; transit accessibility mostly unchanged; (a short-term effect on congestion until cars fill available road space)
- C2 = slight decrease in number of people who can get to work within 45 minutes; increase in transit accessibility;

White Paper 2 - Implementation

Land use co-ordination

- Plan status and compliance

Operational and institutional collaboration

- Alignment with RTP (municipal, provincial, agencies, boards, etc.)

Government involvement

- Multi-ministry responsibility

Travel behaviour

- Programs, services and incentives

Investment Strategy

- Sustainable financing plan being developed in tandem with RTP (including revenue sources and financial tools)
- Life-cycle approach to expansion, optimization and renewal, and operations

White Papers - Consultation

7 regional multi-stakeholder meetings:

- Oshawa May 26, 2008
- Toronto May 28, 2008
- Hamilton May 29, 2008
- Burlington June 4, 2008
- Toronto June 6, 2008
- Mississauga June 10, 2008
- Markham June 12, 2008

Ongoing meetings with municipalities and key stakeholders

Online consultation portal and notice on Environmental Registry

Next Steps

- Synthesis of stakeholder input
- Draft RTP (July 08)
 - More detailed modelling and analysis
 - Consultation including public meetings
- Coordination w/ Investment Strategy
- Final RTP (Fall 08)